PATENT COOPERATION TREATY

From the:
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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PCT

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing *day/month/year*	6 OCT 2004
Applicant's or agent's file reference 11499PC2	**IMPORTANT NOTIFICATION**

International Application No.	International Filing Date	Priority Date
PCT/AU2003/001345	10 October 2003	10 October 2002

Applicant
BOSERIO, Brian Augustine

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translations to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide

Name and mailing address of the IPEA/AU	Authorized officer
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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 11499PC2	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. **PCT/AU2003/001345**	International Filing Date *(day/month/year)* 10 October 2003	Priority Date *(day/month/year)* 10 October 2002
International Patent Classification (IPC) or national classification and IPC **Int. Cl.** [7] E01C 5/00, 5/06, 5/02, E04F 15/08, B44C 1/28, B28B 7/16		
Applicant BOSERIO, Brian Augustine		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

   [X] This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 6 sheet(s).

3. This report contains indications relating to the following items:

   - I [X] Basis of the report
   - II [ ] Priority
   - III [ ] Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV [ ] Lack of unity of invention
   - V [X] Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI [ ] Certain documents cited
   - VII [ ] Certain defects in the international application
   - VIII [ ] Certain observations on the international application

Date of submission of the demand 10 May 2004	Date of completion of the report 29 September 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer **DAVID LEE** Telephone No. (02) 6283 2107

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/AU2003/001345

I. Basis of the report

1. With regard to the elements of the international application:*

☐ the international application as originally filed.

☒ the description, pages **1-11, 13-22** as originally filed,
pages , filed with the demand,
pages **12, 12a** received on **20 September 2004** with the letter of 17 September 2004.

☒ the claims, pages **23** as originally filed,
pages , as amended (together with any statement) under Article 19,
pages , filed with the demand,
pages **24-27,** received on **20 September 2004** with the letter of 17 September 2004.

☒ the drawings, pages **1-8** , as originally filed,
pages , filed with the demand,
pages , received on with the letter of

☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report*

International application No.
PCT/AU2003/001345

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-28	YES
	Claims		NO
Inventive step (IS)	Claims	1-28	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-28	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

(1) JP 2000064572 (2) GB 2239665 (3) DE 2850716 (4) JP 08-281624 (5) DE 29702239
NEW CITATION (6) WO 2000/005453

Novelty & Inventive step - Claims 1 – 28

None of the citations above (or in the ISR) disclose, in the words of claim 1 (& 16), "a grouted joint between adjacent tiles extends irregularly on each side of a joint between said backing layer or base to form an optically seamless joint. None of the citations make any mention of the joint between adjacent tiles. Many refer to "joints" between adjacent stone elements, but they all seem to infer that the joint between tiles is "regular". This feature of making the said joint irregular on each side of the joint is a distinguishing and inventive feature.

Hence, claims 1-28 are novel and have an inventive step.

Accordingly to still another aspect of the invention there is provided a method for manufacture of tiles for seamless paving structures, said method comprising the steps of:-

securing to respective opposite surfaces of said stone elements a backing layer or base having a mounting surface substantially parallel to said support surface, said method characterized in that said irregularly shaped stone elements of each said tile are positioned relative to each other whereby non-linear tile boundaries are formed such that, in use, a grouted joint between adjacent tiles extends irregularly on each side of a joint between respective backing layers or bases to form an optically seamless joint.

Suitably said mounting surface is positioned at a predetermined distance from said support surface to form a tile of predetermined thickness.

If required said backing layer or base may comprise an apertured sheet-like material.

Suitably said backing layer or base is comprised of a flexible material.

Preferably said backing layer or base comprises a mesh-like material.

Suitably said stone elements are secured to a substrate or predetermined shape and/or thickness.

If required said backing layer or base may comprise a pre-formed member securable to said stone elements by an adhesive.

Alternatively said backing layer or base may comprise a

flowable castable material adhesively secured to said stone elements.

If required said backing layer or base may be formed in a mould having an upright boundary wall.

The tile may be formed by placing a plurality of irregularly shaped stone elements onto the surface of a flowable castable material

comprises a flexible material to which said stone elements are secured.

8. A tile as claimed in claim 1 wherein said backing layer or base comprises a cementatious composition with or without a polymeric bonding agent.

9. A tile as claimed in claim 1 wherein said backing layer or base comprises a polymeric composition.

10. A tile as claimed in claim 1 wherein said backing layer or base comprises reinforcing material.

11. A tile as claimed in claim 1 wherein said backing layer or base comprises an apertured sheet like material.

12. A tile as claimed in claim 1 wherein said backing layer or base comprises a plastics mesh.

13. A tile as claimed in claim 10 wherein the reinforcing material is selected from chopped fibres with or without enlarged ends, matting on a metal or plastics mesh.

14. A tile as claimed in claim 1 wherein said tile is formed whereby normally exposed surfaces of stone elements comprising said tile like in a substantially common place.

15. A tile as claimed in claim 1 wherein said tile is formed with a substantially constant thickness whereby normally exposed surfaces of stone elements of adjacent tile lie in a substantially common plane.

16. A method for manufacture of tiles for seamless paving structures said method comprising the steps of:

supporting on a substantially planar support surface, a plurality

of irregularly shaped stone elements with a normally exposed surface of said stone elements being in contact with said support surface; and,

securing to respective opposite surfaces of said stone elements a backing layer or base having a mounting surface substantially parallel to said support surface, said method characterized in that said irregularily shaped stone elements of each said tile are positioned relative to each other whereby non-linear tile boundaries are formed such that, in use, a grouted joint between adjacent tiles extends irregularly on each side of a joint between respective backing layers or bases to form an optically seamless joint.

17. A method as claim in claim 16 wherein said mounting surface is positioned at a predetermined distance from said support surface to form a tile of predetermined thickness.

18. A method as claimed in claim 16 wherein said stone elements are secured to a substrate of predetermined shape and/or thickness.

19. A method as claimed in claim 18 wherein said stone elements are secured to said substrate by an adhesive.

20. A method as claimed in claim 16 wherein said backing layer or base is formed by a flowable castable material adhesively securable to said stone elements.

21. A method as claimed in claim 20 wherein said backing layer or base is formed in a mould having an upright boundary wall.

22. A method as claimed in claim 16 wherein said tile is formed by placing a plurality of irregularly shaped stone elements onto a surface of a

flowable castable material supported on a substantially planar support surface within a predetermined boundary shape and compressing said stone elements into said castable material by a substantially planar compression member lying in a plane substantially parallel to said support surface.

23. A method as claimed in claim 16 wherein said irregularly stone elements are on a substantially planar support surface within a predetermined boundary shape and thereafter a layer of a flowable castable material is applied over said stone elements to form a backing layer or base of predetermined thickness having a mounting surface substantially parallel to said support surface.

24. A method as claimed in claim 23 wherein said stone elements are located on a support surface within an upright boundary wall.

25. A method as claimed in claim 23 wherein a flowable displacement material is introduced into interstices between adjacent stone elements before formation of a backing layer or base thereover to form grout channels therebetween.

26. A method for installing tiles for seamless paving structures, said method including the steps of:

adhering said ties to a planar surface in aligned abutment; and,

introducing a grouting composition into cavities between adjacent stone elements whereby said grouting composition in the region of a joint between adjacent tiles extends irregularly over each side of said joint to form a substantially optically seamless joint.

27. A method of installing tiles according to claim 26 wherein said

tiles are laid on said surface with abutting base edges.

28. A method as claimed in claim 26 wherein said base edges are spaced and stone elements of differing sizes are inserted into the surface of grout therebetween to form an optically seamless joint.